

# Murfreesboro Fire Department 2010 Annual Report



*Murfreesboro "Creating a Better Quality of Life"*



*... creating a better quality of life*

## **MEMORANDUM**

DATE: February 4, 2011

TO: Mayor Tommy Bragg  
Members of the City Council  
City Manager Rob Lyons

FROM: Fire Chief Cumbey Gaines

SUBJ: 2010 ANNUAL REPORT

I am pleased to present the 2010 Annual Report for the Murfreesboro Fire Department. This report summarizes activities of the Fire Department from January 1, 2010 through December 31, 2010.

I am proud of the men and women that make up this department. Our department and its members continue to be recognized statewide as leaders of today's progressive fire service. Other departments, both local and across the state, frequently develop programs for their citizens based on the innovative ideas already implemented by the men and women of the Murfreesboro Fire Department.

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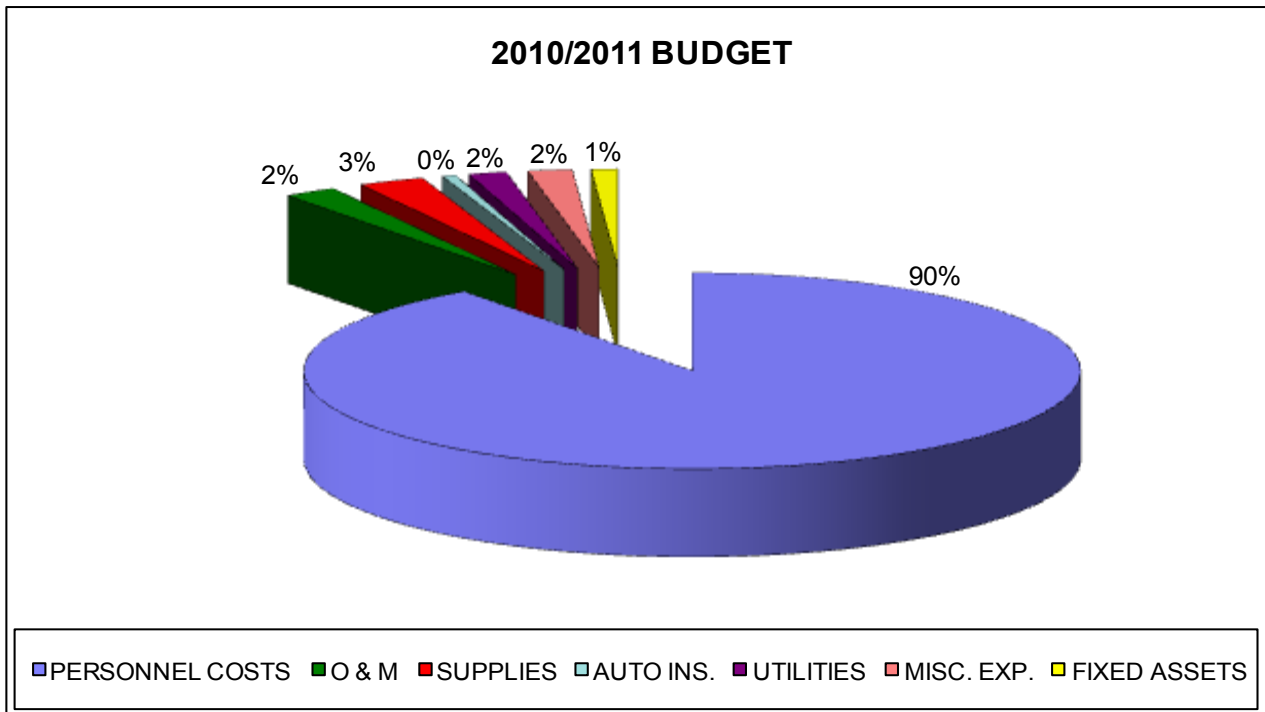
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## Budget

The Murfreesboro Fire Department's (MFD) total budget for the fiscal year 2010/2011 is \$13,985,386. Grant funds of \$77,020 are included in the Miscellaneous Expense in the 2010/2011 budget. Budget figures do not include capital improvement projects.

DESCRIPTION	2008/2009 ACTUAL	2009/2010 ACTUAL	INCREASE/ (DECREASE)	2010/2011
PERSONNEL COSTS	\$12,555,526.86	\$12,206,172.01	\$380,943.99	\$12,587,116.00
OPERATION & MAINTENANCE	279,053.27	276,707.18	28,418.82	305,126.00
SUPPLIES	406,599.09	337,689.52	45,935.48	383,625.00
AUTO INSURANCE	74,990.00	74,383.00	4,284.00	78,667.00
UTILITY SERVICE	197,338.07	197,075.71	23,324.29	220,400.00
MISC. EXPENSE	144,006.47	78,809.30	177,642.70	256,452.00
FIXED ASSETS	156,587.55	145,694.76	8,305.24	154,000.00
<b>TOTAL BUDGET</b>	<b>\$13,814,101.31</b>	<b>\$13,316,531.48</b>	<b>\$668,854.52</b>	<b>\$13,985,386.00</b>



## 2010 Accomplishments

### GRANTS

MFD was awarded two grants in 2010. MFD received a grant from the Assistance to Firefighters Grant Program administered by FEMA. Grant funds were used to purchase computer based training software and hazardous materials equipment. The approved project costs totaled \$96,275. The Federal share was eighty percent (80%) or \$77,020 of the approved amount, and the City's share was twenty percent (20%) or \$19,255. MFD prepared a request for the City of Murfreesboro to apply for a grant from the Christy Houston Foundation. A total of \$67,682 was received from the Christy Houston Foundation. The City matched the grant funds with \$71,507 for the purchase of forty-seven (47) Automated External Defibrillators (AEDs), twenty-six (26) for the MFD and twenty-one (21) for other City departments. Five (5) Rad-57 Pulse CO-Oximeters were also purchased for the MFD.

### NEW EQUIPMENT

- Two 75' Pierce Aerials with Equipment
- 2010 Ford F-150 Truck
- 2002 Chevrolet Tahoe
- Hazardous Materials Trailer with Generator
- Hazardous Materials Equipment (Grant)
- Computer Based Training Software (Grant)
- Twenty-six Automated External Defibrillators (Grant)
- Five Rad-57 Pulse CO-Oximeters (Grant)
- Eighteen Dry Suits, Helmets, Personal Flotation Devices, Whistles, Flashlights, Helmet Lights, Ropes with Throw Bags, Tow Tethers, etc. for Water Rescue
- Seventy-four RIT EZ-Scape Belts
- Fourteen GPS Units for Apparatus
- Four SCBA Bottles (Sixty Minutes)
- Ten Throat Microphones for Hazardous Materials
- Twenty-seven Level B Hazardous Materials Suits
- Four Sections of 1.75" Hose
- Eight 6-in-1 Rescue Tools
- Three Computers (Administration)
- Preplanning Software
- Five Medical Supply Storage Cabinets

**NEW AERIAL - LADDER 6  
WAS DELIVERED  
IN AUGUST 2010**



## **2010 Accomplishments**

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### **STATION/BUILDING PROJECTS**

- Administration - Replaced Roof on MFD Administration/Water Department Engineering Building; Replaced Carpet and Painted Hallway and Chiefs' Offices; Replaced Ceiling in Hallway and Restrooms; Replaced Front Door and Lights in Restrooms and Storage Closet (Trng.); Replaced Sump Pump and Dehumidifier in Basement; Restriped Parking Lot; Replaced Chief's and Deputy Chief's Desks; Replaced Office Chairs
- Headquarters - Painted Offices and Front Lounge; Replaced Baseboards and Electrical Outlets; Rebuilt and Vented for SCBA Compressor; Replaced Washing Machine and Five Mattresses
- Station 2 - Repaired Gutters, Roof, and Dryvit; Vented SCBA Compressor; Replaced HVAC Unit For Front Lounge
- Station 3 - Replaced Roof, Windows, Kitchen Cabinets, Appliances, and Light Fixtures; Added New Lights and Ceiling Fans; Replaced Carpet and Baseboards; Restriped Parking Lot; Painted Interior and Engine Room; Replaced Five Mattresses
- Station 4 - Replaced Dryer and TV
- Station 5 - Replaced Eight Exterior Columns, Lawnmower, and Five Mattresses
- Station 6 - Resealed Drive and Parking Lot; Cleaned Basement and Air Handler; Installed Moisture Barrier in Basement; Replaced Downstairs HVAC Unit; Painted Engine Room; Replaced Lawnmower, Microwave, Water Heater, and TV
- Station 7 - Replaced Lawnmower, Stove, Dishwasher, TV, and Four Mattresses
- Station 8 - Painted Engine Room; Installed Carpet in Bedroom and Weight Room; Repaired Gutters; Replaced Lawnmower
- Station 9 - Painted Bedroom, Laundry Room, Columns and Doors; Repaired Privacy Fence; Replaced TV

### **FUTURE PROJECTS AND EQUIPMENT**

- Staffing of Fire Station 10
- Installing a Generator at Headquarters and Station 9 (Grant)
- Purchasing and Installing iWalkie Software to Convert Internet-enabled Handheld Devices into Soft Radios for City Departments
- Updating Transponder Boxes at All Fire Stations and Dispatch

# 2010 Accomplishments

## PUBLIC RELATIONS EVENTS

- Annual Smoke Detector Program
- National Night Out
- Toys for Tots Campaign
- Hosted Fire Safety Inspector's Conference
- Hosted the Tennessee Advisory Committee on Arson Conference
- Hosted the Tennessee Public Fire and Life Safety Educators Association Conference
- Leadership Rutherford Emergency Services Event

## MISCELLANEOUS

- Donated 1988 Hahn Fire Engine to Rutherford County Fire & Rescue
- Three Children Received MFD's Courage Award for Reporting a Fire
- Public Service Announcements on Fire Safety Produced & Aired on Channel 3
- MFD Honor Guard Presented Colors at Fourteen Events
- Firefighter of the Month Award
- Hired Five New Personnel to Replace Employees that Retired, Resigned, or Terminated



**PERSONNEL  
PRESENTED  
RUTHERFORD CO.  
FIRE & RESCUE  
WITH 1988 HAHN  
FIRE ENGINE**



**CHILDREN  
RECEIVED  
COURAGE  
AWARD**



**PERSONNEL  
SPRAYED WATER  
FOR THE PARKS &  
RECREATION  
DEPARTMENT'S  
WATER DAY**

## Incident Responses

The Murfreesboro Fire Department uses the Tennessee Fire Incident Reporting System (TFIRS) to report each emergency incident. TFIRS is a member of the National Incident Reporting System (NFIRS). Our incident response statistics are compiled with all other Fire Departments at the state and national level. These statistics can be utilized to focus on current problems and to predict future ones within the fire service.

The average travel response time for the first arriving apparatus on an incident was approximately four minutes (4:01). The estimated property and content loss for the City of Murfreesboro was \$2,691,064; the estimated property and content value saved was \$8,951,520. The three most extensive fire losses (property and contents) were a commercial business fire on W. Main Street at \$796,100, a house fire on Banner Drive at \$111,771, and a commercial business fire on N.W. Broad Street at \$95,000.

The Fire Prevention Division investigated fifty-one (51) structure fires. Six (6) of the fifty-one (51) fires were ruled incendiary. Two arrests were made in 2010. The other incendiary fires are still being investigated. There were two fatal fires in 2010. Ninety percent (89.92%) of structure fire causes were determined by personnel, leaving only ten percent (10.08%) undetermined. Cooking fires were the highest ranked cause at twenty-three and one-half percent (23.53%).

The City of Murfreesboro entered an agreement to provide full fire suppression services for the Veterans Administration Tennessee Valley Healthcare System, Alvin C. York Campus, on June 1, 2001. In accordance with this agreement, the VA pays monthly for fire suppression service. The Murfreesboro Fire Department also performs inspections of fire department connections and conducts hydrant flow tests.



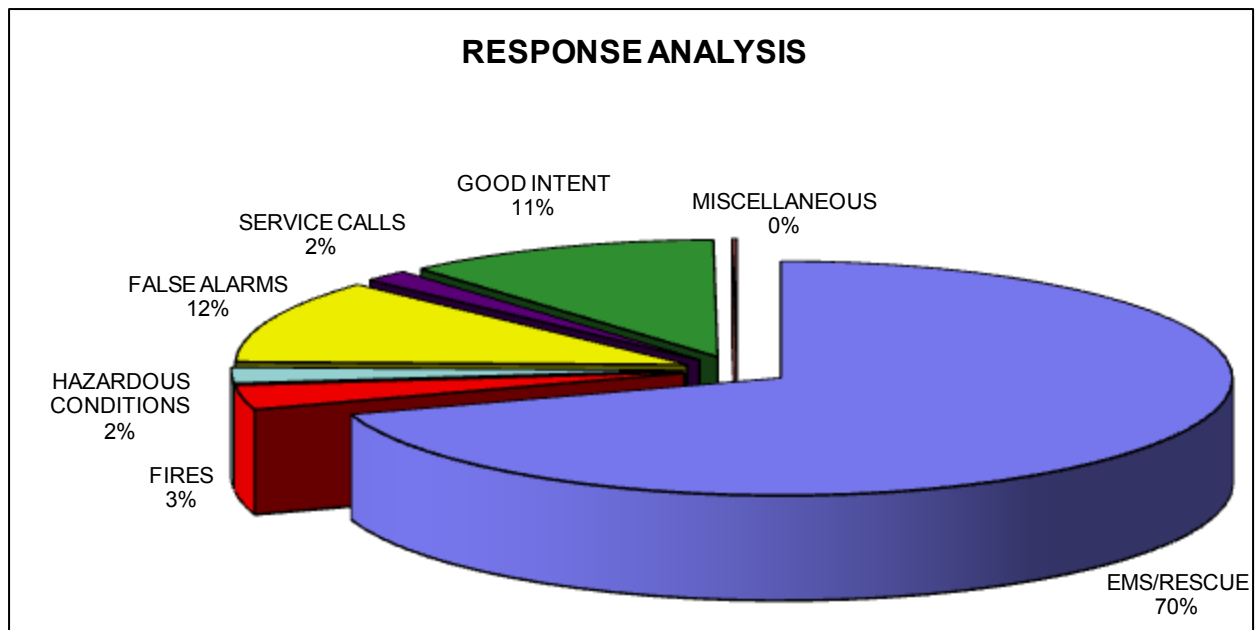
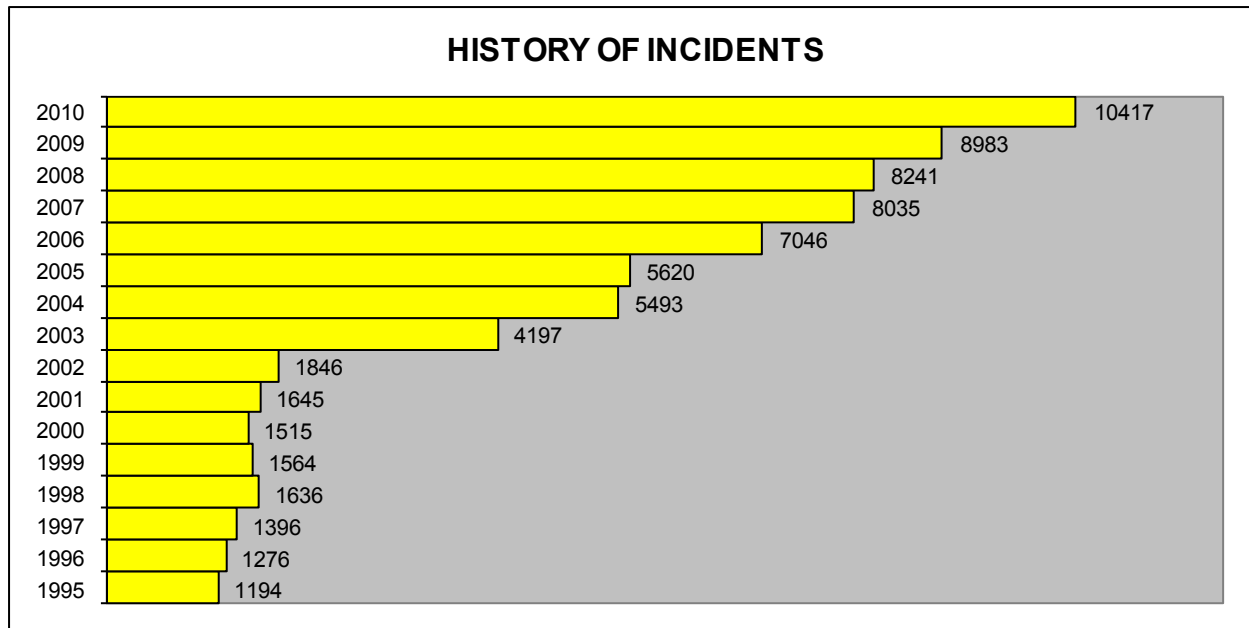
**PERSONNEL BATTLED A  
COMMERCIAL BUSINESS  
FIRE ON W. MAIN STREET**



**PERSONNEL EXTINGUISHED  
A HOUSE FIRE  
ON HILLCREST DRIVE**

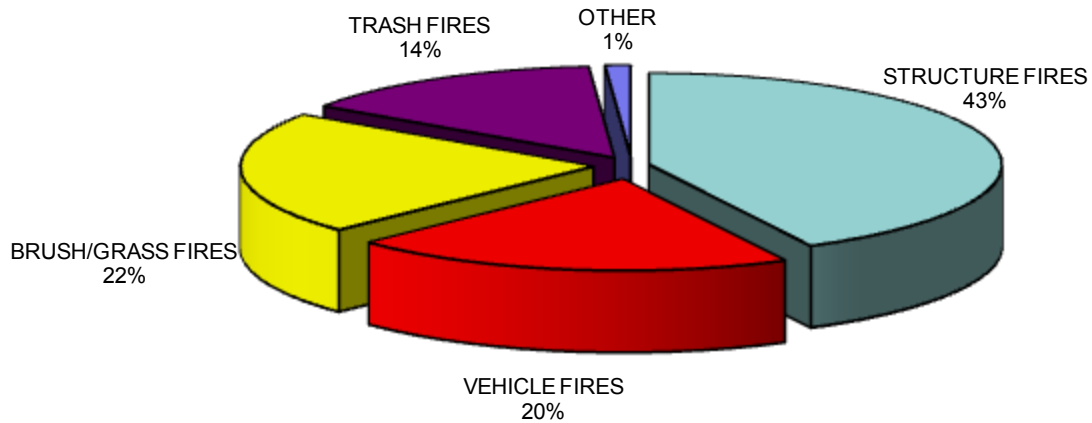
## Incident Responses

In 2010, the Murfreesboro Fire Department responded to 10,417 incidents, including 7,286 EMS/Rescue calls. Twenty-five (25) victims were extricated from vehicle accidents. Total calls increased approximately sixteen percent (15.96%) from 2009, and 588 percent (587.6%) since 2000. The following charts illustrate the history of incidents; response analysis; various types of fires; the number of incidents by time of day, day of week, and district; and responses by apparatus; and false alarm analysis.

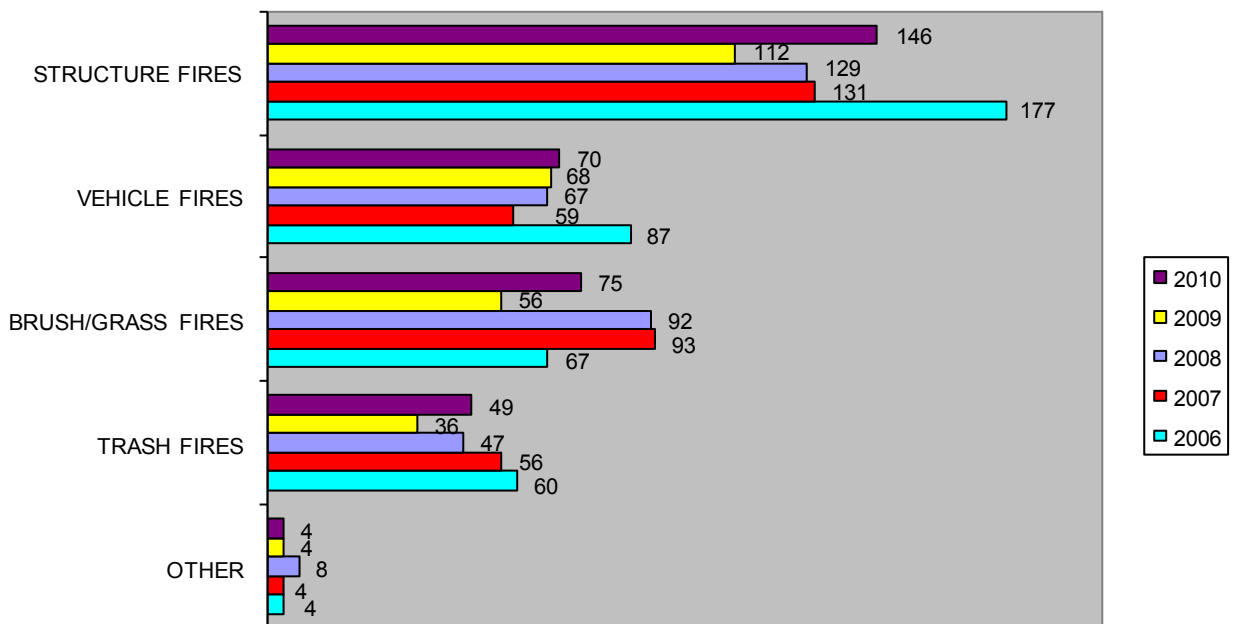


# Incident Responses

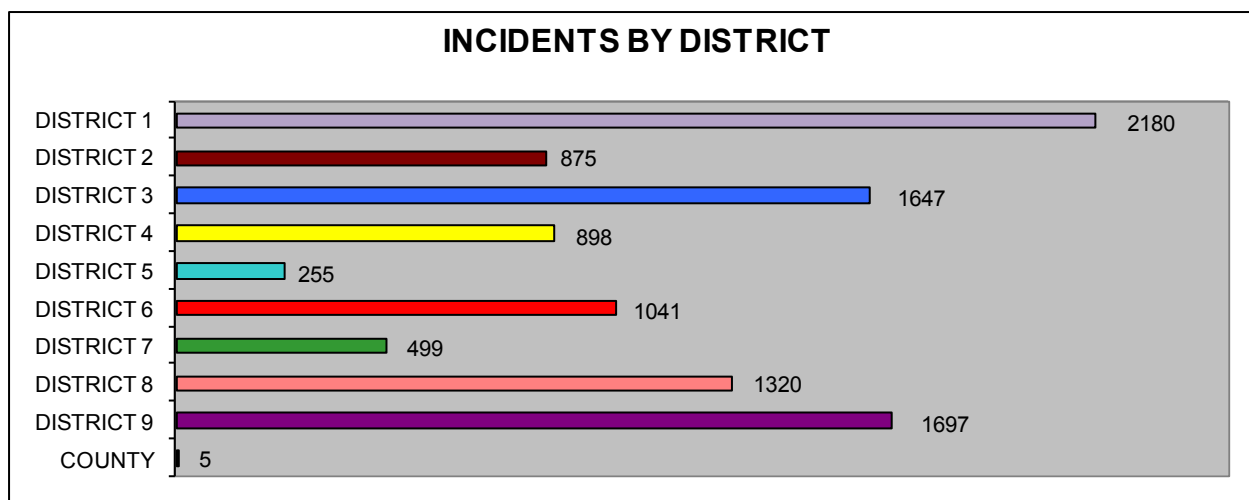
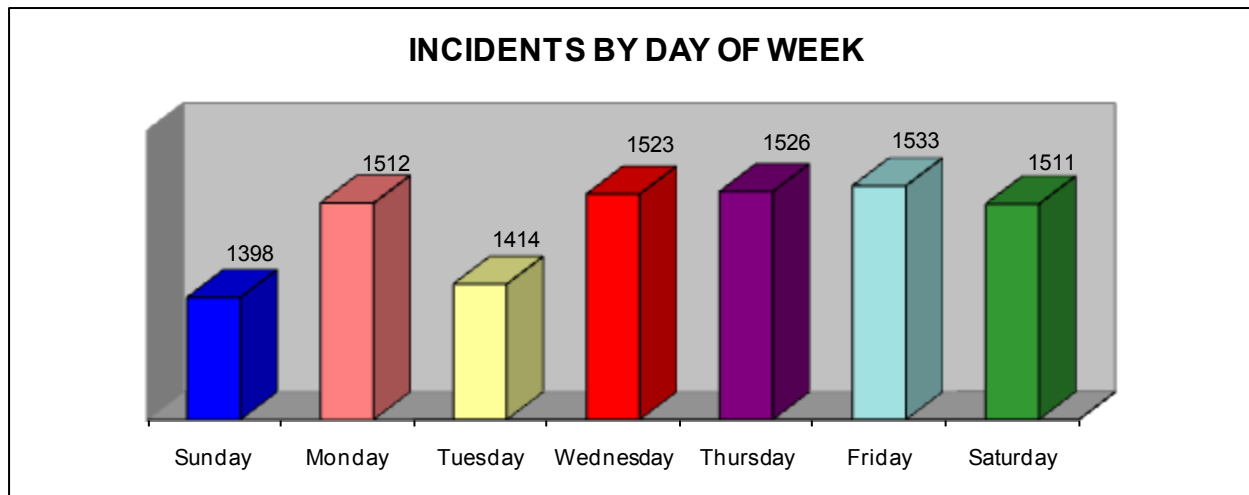
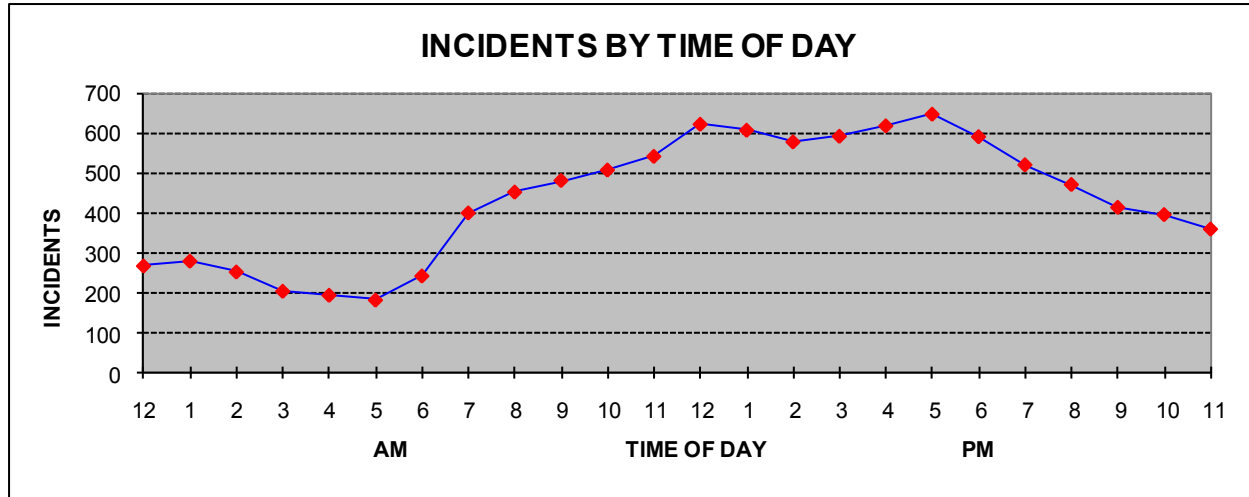
## TYPES OF FIRES



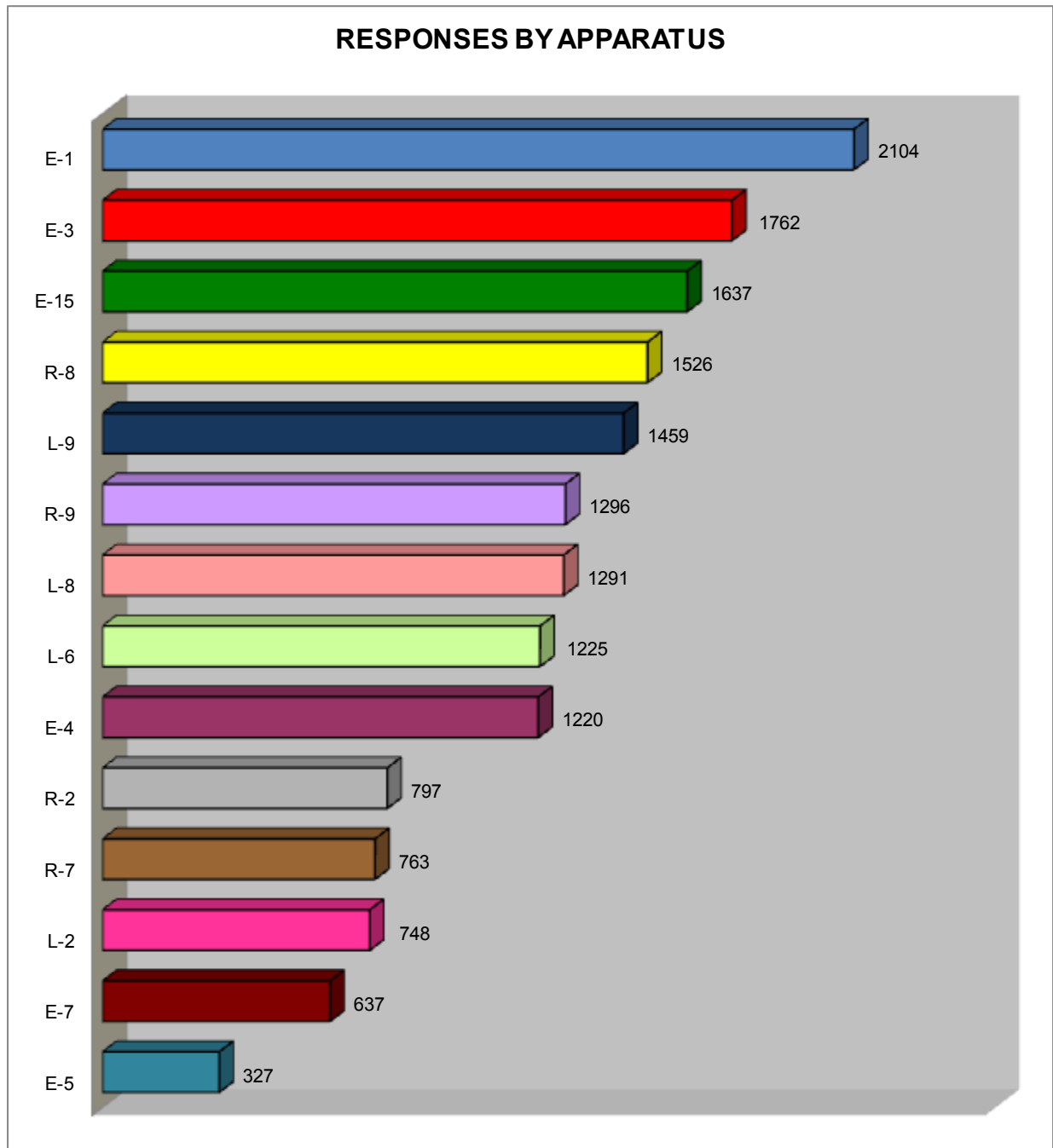
## TYPES OF FIRES BY YEAR



# Incident Responses



## Incident Responses

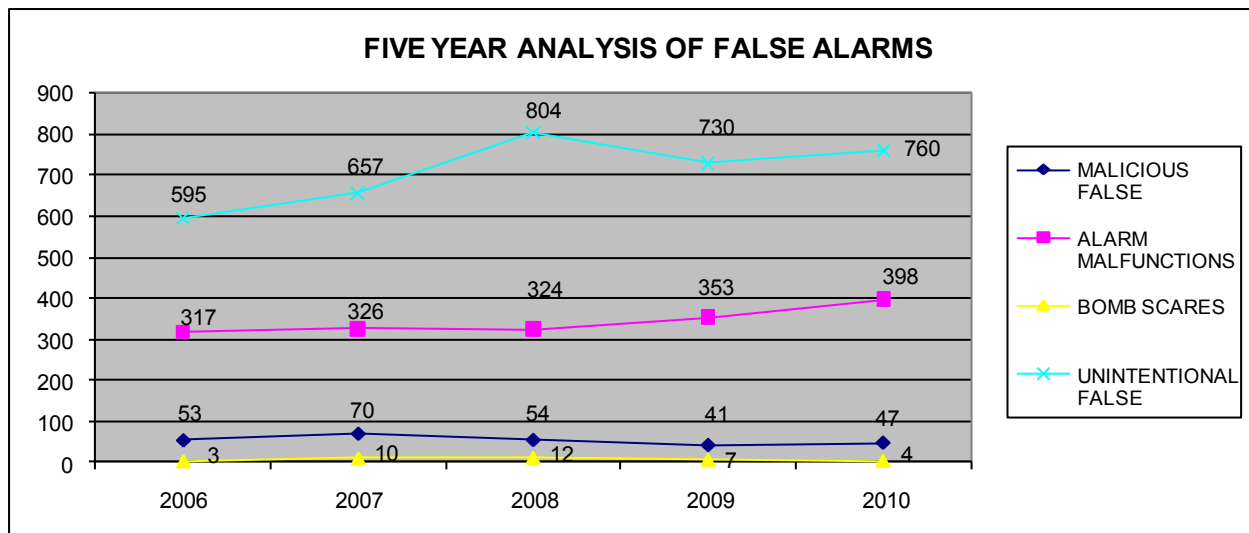
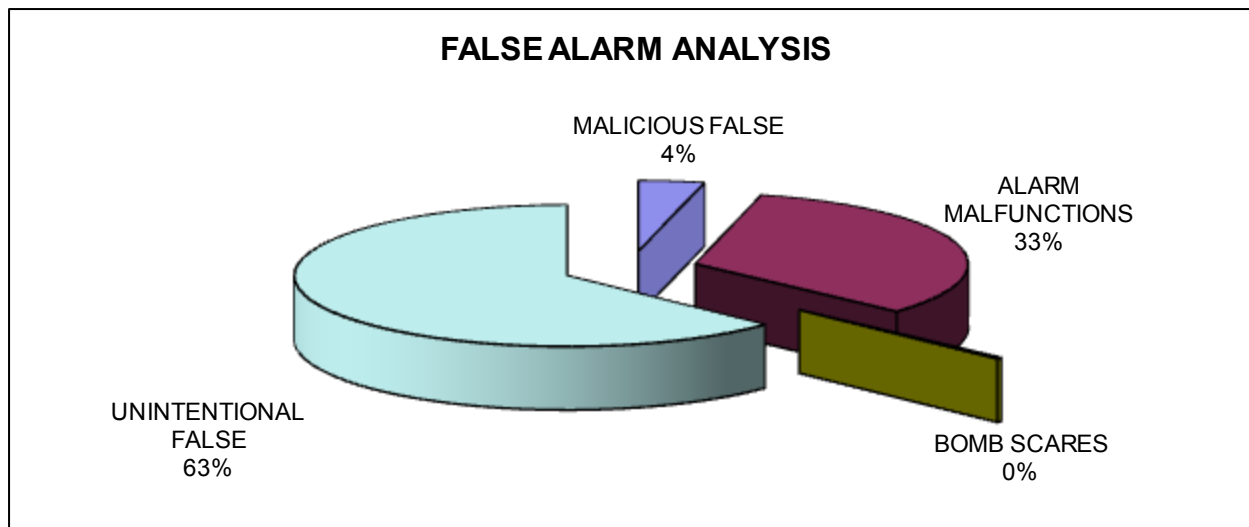


Multiple apparatus respond to most types of incidents. Typically, only one apparatus responds to a medical call. The above chart depicts the number of incidents each apparatus responded to in 2010; the chart does not include responses of Cars 20 through 35, the brush truck, hazmat truck, or standby engines. Apparatus responses totaled 17,765 on 10,417 incidents.

## Incident Responses

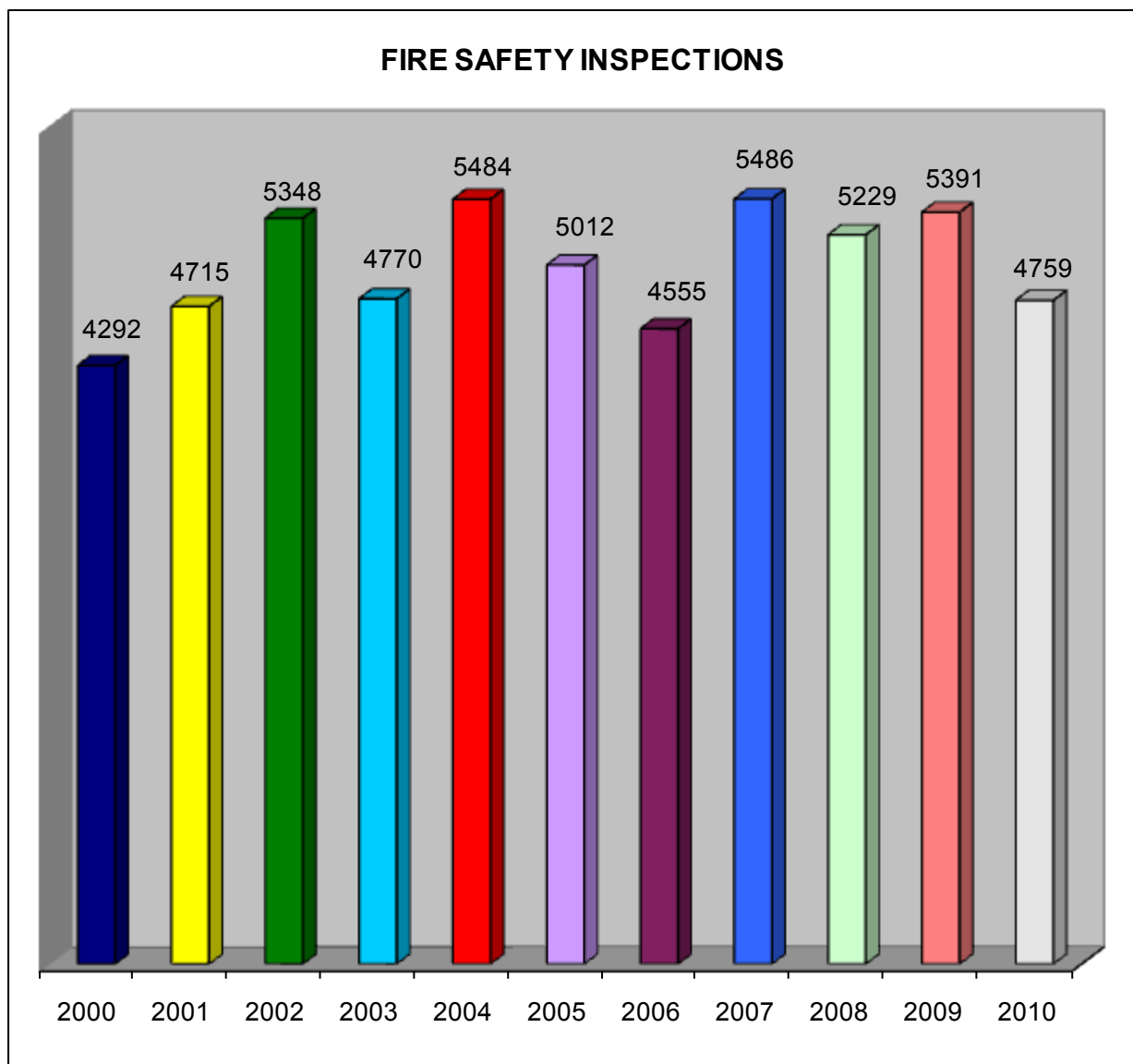
The Murfreesboro City Code regarding alarm systems was amended in 1999. The purpose of this ordinance is to encourage alarm owners to maintain their alarm systems and to eliminate any unnecessary emergency traffic. This ordinance is also designed to encourage better maintenance and proper installation of alarms. The Murfreesboro Fire Department is making an effort to assist business owners in identifying and eliminating potential problems with their alarm systems.

The Murfreesboro Fire Department received a total of 1,209 false alarms in 2010. False alarms represent twelve percent (12%) of the total calls for service. The types of false alarms are bomb scares, malicious false, alarm malfunctions, and unintentional false.



## Fire Prevention

Fire Prevention is an essential function in reducing fire losses by decreasing the incidence of uncontrolled fires. Inspections help ensure life safety conditions within a structure. During inspections, a Fire Inspector checks for potential fire hazards and advises the owner of corrections needed. These inspections provide an opportunity to educate the public. In 2010, 4,759 fire safety inspections were conducted.



## Fire Prevention

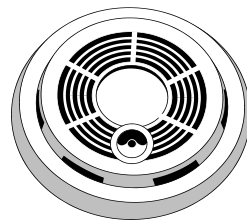
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The Captain/Shift Inspectors conduct routine fire inspections on existing buildings. Items inspected are exit doors, proper operation of exit doors, proper number of exits, emergency lighting, hazardous materials storage, fire suppression systems, fire hydrants, and fire alarm systems. Assistant Fire Marshals go to construction sites to observe the installation of fire detection equipment, fire suppression systems, notification systems, fire pumps, access to the facility, proper fire hydrant location, and proper fire flows.

Site plans are reviewed biweekly in conjunction with the Planning and Water Departments. The Fire Marshal reviews the plans for proper access to the facility, number of fire hydrants, size of water main, and any hazards existing to hinder fire suppression activities. Comments are noted on the site plan for revision before going to the Planning Commission for approval. Architectural drawings are reviewed weekly with the Plans Examiner of the Building Codes Department to ensure that the building plans meet all code requirements for a safe building.

The Murfreesboro Fire Department monitors open burning for the City of Murfreesboro. Individuals requesting information on open burning are informed of the State and EPA guidelines prior to burning. Approximately 167 requests were made in 2010.

The MFD Fire Prevention Division receives and distributes smoke detectors annually. Since 1990, the MFD Fire Prevention Division has given free smoke detectors to low income families, senior citizens on a fixed income, and burn out victims. In 2000, the MFD started a city-wide smoke detector placement program called Project SAFE "Smoke Alarms for Everyone." Personnel went door to door installing smoke detectors and batteries free of charge. Personnel installed 1,395 detectors and 606 batteries during 2000. In 2010, personnel continued to install smoke detectors through Project SAFE when requested. The MFD plans to revisit the idea of going door to door to further ensure that the citizens of Murfreesboro have working smoke detectors.



There are several ways the Fire Prevention Division learns names of individuals who need smoke detectors. During educational events, such as health fairs, career days, and safety classes, Assistant Fire Marshals ask individuals if they know of anyone who needs a smoke detector. Home nurses and aides also turn in names to our office. If the individual receiving the smoke detector needs assistance installing it, MFD personnel will go to the home to help.

## Fire Safety Education

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Fire safety education is one of the Murfreesboro Fire Department's primary goals. Fire safety education is the key to saving lives and is taught throughout the year. Our main focus is on home fire safety because over eighty percent (80%) of fire deaths occur at home. The Fire Marshal's Office also educates area business people on fire safety. In 2010, the Murfreesboro Fire Department educated approximately 22,150 children and adults on fire safety.

"Freddie the Fire Truck," acquired in April 2006, is an excellent tool for teaching fire safety. Freddie is a fully animated robot which moves, speaks, winks, blinks, and sounds a siren all by remote control. Freddie maneuvers easily in school classrooms and is just the right size for teaching children. The combination sprinkler/fire safety house, acquired in March 2007 through a federal grant, is another valuable educational tool used to teach children and adults about fire safety and burn prevention. The combination sprinkler/fire safety house is a single story house with a kitchen, sitting area, bedroom and a burn area to show sprinkler operation and effectiveness. Personnel can demonstrate to home and business owners that residential and business sprinkler systems help prevent fires from spreading out of control.

Fire Prevention Week was October 3 through 9, 2010. The national theme was "Smoke Alarms: A Sound You Can Live With." During September and October, Murfreesboro Fire Department personnel taught fire safety at each city school, each county school within the city limits, preschools, and daycares using "Freddie the Fire Truck" and the Fire Safety House. School children learned about smoke detectors, escaping from windows, and safe places to meet. Students were given red plastic fire helmets.

Station tours are scheduled all during the year. During these tours, children learn about fire safety and prevention. Children get to look closely at fire engines, hear the sirens, watch a safety video, and much more. Children receive red plastic fire helmets, as well as, fire safety pamphlets to carry home. The Murfreesboro Fire Department also participated in several public relations events that provided opportunities to educate individuals on fire safety. Information packets on fire safety were distributed, and personnel were available to answer questions on fire safety.



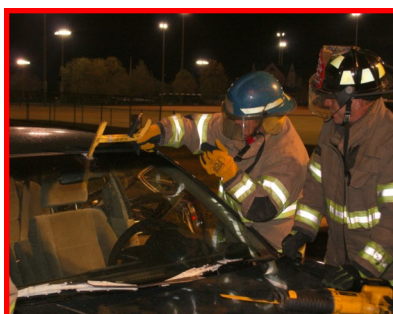
**ASST. FIRE MARSHALS  
TAUGHT CITY BUS DRIVERS  
HOW TO PROPERLY USE A  
FIRE EXTINGUISHER**

## Citizens Fire Academy

The Murfreesboro Fire Department held its first Citizens Fire Academy (CFA) in 2001 for citizens of the community. Ten (10) students graduated from the ninth session of the CFA in 2010. Since inception, 105 students have graduated from the CFA.

The Citizens Fire Academy (CFA) offers a small group of area residents the opportunity to view and participate in the activities and services provided by the Murfreesboro Fire Department. All activities offered during the Academy are optional; students only participate in activities to which they feel comfortable. Academy participants receive an insider's view of the department's operations. The CFA helps participants better understand the department's functions, operations, and procedures. The CFA is designed to provide knowledge in fire prevention, extinguisher training, cardiopulmonary resuscitation, and a better understanding of the firefighter's role in the community. Participants complete this program more conscious of their environment and safety oriented. Participants have the opportunity to interact with department personnel and ask questions about all aspects of the department's role in our community. Participants leave the Academy with a higher respect for the fire service.

A significant portion of the Academy consists of classroom instruction and discussions along with special activities including a ride-along in a fire engine, wearing and using a self-contained breathing apparatus, wearing turnout firefighting clothing, firefighting demonstrations and participation, climbing and riding an aerial apparatus, and other important aspects of the department. All class instructors are members of the Murfreesboro Fire Department and are committed to providing appropriate information to all participants in the Academy.



**INSTRUCTORS  
EDUCATED CFA  
STUDENTS ABOUT  
VARIOUS ASPECTS OF  
A FIREFIGHTER'S JOB**

## Firefighter Training

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In 2010, 183 Fire Department personnel trained 64,785 hours according to individual training records for a monthly average of approximately twenty-nine and one-half (29.51) hours per firefighter. Firefighters train a minimum of twenty (20) hours per month to help maintain the City of Murfreesboro Insurance Services Office (ISO) Class Two Fire Rating. Firefighters receive training from MFD Instructors, the Tennessee Fire Service and Codes Enforcement Academy (TFACA), the Tennessee Emergency Management Agency (TEMA), the National Fire Academy (NFA), the Tennessee Association of Rescue Squads (TARS), and numerous schools, agencies, on-line courses, and workshops. In 2010, personnel attended 89 specialized courses for a total of 7,775 hours.

OSHA regulations mandate facepiece fit tests be administered to each firefighter annually. The fit tests ensure that the facepiece fits properly. The MFD uses the Qualitative Irritant Smoke Protocol to fit test each firefighter's SCBA facepiece. OSHA also requires an annual respiratory evaluation on each firefighter. In 2010, a licensed doctor administered an annual breathing test to each firefighter.

The Murfreesboro Fire Department Training Office oversees the maintenance of 126 self-contained breathing apparatus (SCBA) and 241 cylinders for the department. Regulations require that composite cylinders be hydrostatically pressure tested every five (5) years. All MFD SCBA regulators are tested annually by an outside source to ensure performance. The MFD maintains four (4) breathing air compressor units and thirty-two 6,000 PSI cascade cylinders that supply all SCBA breathing air for the department. The breathing air quality was tested quarterly in the air compressor units by an outside source in 2010. These tests ensure non-toxic air is being inhaled by our firefighters while using their SCBA.

The Murfreesboro Fire Department Training Office keeps records of hazardous chemicals existing at facilities in Murfreesboro. The federal government requires businesses to annually submit a Tier II form to the Fire Department detailing any extremely hazardous materials stored at their facility. The Tier II form contains lifesaving information and is available for all personnel to study. Tier II information is incorporated into our dispatch system.

The Murfreesboro Fire Department Training Office oversees the annual inventory check of all MFD fire stations, apparatus, equipment, and fixed assets. In 2010, the MFD had ten (10) fire stations, one (1) administration office building, twenty-four (24) fire apparatus, and thirty-one (31) other vehicles. Each fire station and fire apparatus contains an array of relative equipment and when combined, sums up to thousands of fixed assets.

## Firefighter Training

The MFD follows the Tennessee Association of Rescue Squads (TARS) Vehicle Extrication teaching curriculum for vehicle extrication training. The vehicle extrication training course consists of three days of training including one day in the classroom and two days at an auto salvage yard. At the salvage yard, the students practice stabilizing vehicles, removing doors, windows, and tops, and pushing dashboards off of victims. A written test is administered to evaluate the students. Personnel also attend the three day TARS Advanced Extrication course. TARS requires vehicle extrication refresher training every two years. In 2010, all MFD firefighters had a TARS training certificate in vehicle extrication.

The MFD uses the United States Department of Transportation and the United States Department of Health and Human Services First Responder: National Standard Curriculum for teaching Medical First Responder. The Medical First Responder course consists of 70 hours of cognitive and practical training. At the end of the training course, students must pass a National Registry First Responder test. Students passing the exam receive a state issued certificate allowing them to perform the duties of a Medical First Responder. A Medical First Responder certificate is valid for two years. MFD firefighters receive sixteen (16) hours of emergency medical refresher training every two (2) years in addition to six (6) hours annually.

In 2010, the MFD had 102 personnel certified in Medical First Responder, seventy (70) Emergency Medical Technicians (EMT), and seven (7) Paramedics. Three (3) MFD Firefighters/Paramedics and the Fire and Medical Training Coordinator/EMT are certified Medical First Responder Instructors and teach the MFD Medical First Responder classes.



**PERSONNEL  
PRACTICED SWIFT  
WATER RESCUE SKILLS**



**PERSONNEL  
ATTENDED  
CPR TRAINING**



**PERSONNEL  
TRAINED ON NEW  
AERIAL - LADDER 9**

## Firefighter Training

The MFD has participated in the State of Tennessee's Commission on Firefighting certification program since 1986. Currently, the MFD participates in twelve (12) levels of certification. All tests consist of practical and written portions. In 2010, the MFD administered the practical part of the Fire Apparatus Operator, Instructor I, Fire Officer II, and Fire Safety Compliance Officer I and II tests. The Firefighting Commission administered the practical for their Firefighter I, Journeyman Firefighter/Firefighter II, Officer I, Instructor II, Safety Officer, and Public Fire and Life Safety Educator I and II tests. The Firefighting Commission administers all written certification tests. In 2010, the MFD had ninety-nine percent (98.91%) Firefighter I state certified personnel.

The MFD also participates in the Commission's State Educational Incentive Program. The program requires firefighters to complete a minimum of forty (40) hours of approved training per year. All State Educational Incentive Training is administered within the MFD and is subject to state audit. In 2010, firefighting personnel received \$107,400 for their 2009 State Educational Incentive Training.

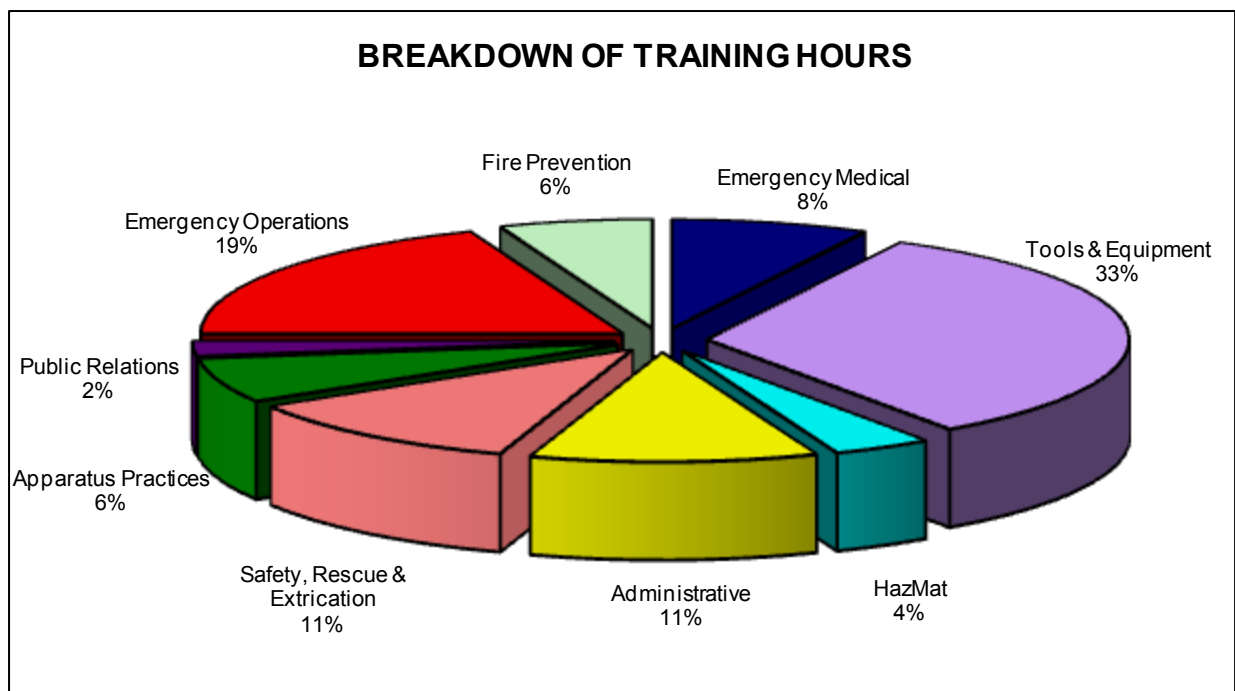
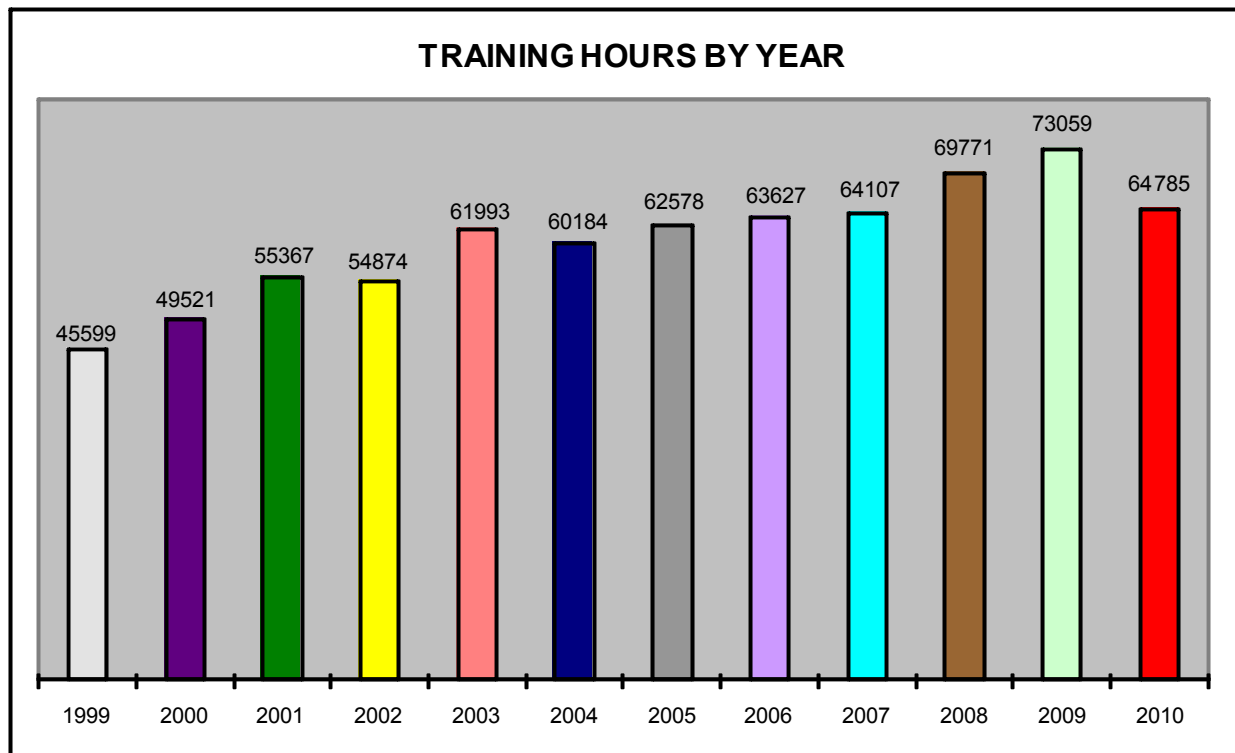
The MFD training office maintains records of fire apparatus fire pump annual service tests. In 2010, the service test was performed on sixteen (16) MFD fire apparatus. Most MFD fire apparatus can deliver 1500 gallons of water per minute (GPM). Each pump system is tested according to the National Fire Protection Association (NFPA) Standard #1911 which requires a 20 minute capacity (1500 GPM) test at 150 pounds per square inch (PSI) pump pressure, a 10 minute 70% capacity test at 200 PSI, and a 10 minute 50% capacity at 250 PSI. The MFD performs the fire apparatus fire pump systems tests at the Smyrna Fire Department or Kittrell Volunteer Fire Department water-drafting pits. Nine aerial/ladder apparatus are certified annually to ensure safe operation.

The MFD training office oversees the annual fire hose tests. The MFD fire hose inventory consists of 1", 1.5", 1.75", 2.5", 3", and 4" fire hose that are 50-100 feet in length. The test requires each hose to be filled with pressurized water for five minutes. In 2010, MFD personnel tested approximately 53,425' of fire hose.



**PERSONNEL  
LEARNED HOW  
TO USE SELF  
RESCUE BELTS**

# Firefighter Training



# Firefighter Training

